Listing of the Claims

1. (currently amended) A computer program product ~~including computer-readable storage~~ <u>including computer-readable storage</u> ~~encoding~~ <u>with</u> a computer program, <u>the computer program</u> ~~for~~ executing a computer process on a computer system, the computer process ~~comprising~~:

identifying a plurality of storage devices to be configured in a storage network;

identifying a number of host port Logical Unit Numbers (LUNs) which are configured on each of the storage devices;

identifying a number of host port connections to the storage devices; and

for each host port connection, determining actual loading of input/output (IO) jobs for each of the storage devices based at least in part on a queue depth for each of the host port LUNs.

2. (original) The computer program product of claim 1 wherein the computer process further comprises determining actual loading for each of the storage devices based at least in part on a number of host groups in the storage network.

3. (original) The computer program product of claim 1 wherein the computer process further comprises determining actual loading for each of the storage devices based at least in part on a number of LUN security groups in the storage network.

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4. (original) The computer program product of claim 1 wherein the computer process further uses a loading factor to determine if the actual loading for each of the storage devices exceeds a maximum loading.

5. (original) The computer program product of claim 1 wherein the computer process further simplifies host groups and LUN security groups into virtual connections for analysis.

6. (currently amended) A computer program product including computer-readable storage encoding with a computer program, the computer program for executing a computer process on a computer system, the computer process comprising:

identifying a plurality of storage devices to be configured in a storage network;

identifying a number of host port connections to the storage devices; and

for each host port connection, determining actual loading for each of the storage devices based at least in part on the a queue depth for each of the host port connections.

7. (original) The computer program product of claim 6 wherein the computer process further comprises determining actual loading for each of the storage devices based at least in part on a number of host groups in the storage network.

8. (previously presented) The computer program product of claim 6 wherein the computer process further comprises determining actual loading for each of the storage devices

based at least in part on a number of Logical Unit Numbers (LUNs) LUN security groups in the storage network.

9. (original) The computer program product of claim 6 wherein the computer process further uses a loading factor to determine if the actual loading for each of the storage devices exceeds a maximum loading.

10. (original) The computer program product of claim 6 wherein the computer process further simplifies host groups and LUN security groups into virtual connections for analysis.

11. (currently amended) A method providing an input/output (IO) flow control mechanism in a storage network, comprising:

configuring a storage device in the storage network with a plurality of host port Logical Unit Numbers (LUNs) ~~LUNs~~;

identifying a queue depth for each of the host port LUNs;

automatically determining actual loading for the storage device based at least in part on ~~the~~ a queue depth for each host port LUN; and

accepting the storage device configuration if the actual loading for the storage device is no more than a maximum loading for the storage device.

12. (original) The method of claim 11 wherein automatically determining actual loading for the storage device is also based at least in part on a number of host paths connected to the storage device.

13. (original) The method of claim 11 wherein automatically determining actual loading for the storage device port is also based at least in part on a number of LUNs configured for the storage device.

14. (original) The method of claim 11 wherein automatically determining actual loading for the storage device is also based at least in part on a number of host groups in the storage network.

15. (currently amended) The method of claim [[15]] 11 wherein automatically determining actual loading for the storage device is also based at least in part on a number of LUN security groups in the storage network.

16. (original) The method of claim 11 further comprising automatically determining actual loading for a plurality of backend LUNs connected to the storage device.

17. (original) The method of claim 11 further comprising iteratively determining actual loading for a plurality of storage devices in the storage network.

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18. (previously presented) The method of claim 11 wherein the maximum loading for the storage device is based on a loading factor for test environments.

19. (previously presented) The method of claim 18 wherein the loading factor is in the range of about 80% to 90% of a service queue depth for the storage device.

20. (previously presented) A method of device loading in a storage network, comprising:

configuring the storage network with a plurality of host port connections to at least one storage device; and

for each of a plurality of host port connections to the at least one storage device, determining actual loading of the at least one storage device based at least in part on a queue depth of each host port connection so that the number of input/output (IO) jobs being issued by a host do not exceed the queue depth of a service queue.

21. (original) The method of claim 20 wherein determining actual loading is also based at least in part on a number of host groups in the storage network.

22. (previously presented) The method of claim 20 wherein determining actual loading is also based at least in part on a number of Logical Unit Numbers (LUNs) LUN security groups in the storage network.

23. (original) The method of claim 20 further comprising determining actual loading for a plurality of backend LUNs connected to the at least one storage device.

24. (original) The method of claim 20 further comprising iteratively determining actual loading for a plurality of storage devices in the storage network.

25. (previously presented) The method of claim 20 wherein device loading is a function of maximum queue depth for each target port, number of host paths connected to the target port, queue depth for each LUN on the host port, and number of LUNs configured on the target port.

26. (previously presented) The method of claim 20 wherein device loading is a function of queue depth for each target port, number of host paths connected to the target port, and queue depth for each host port.

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